

Consumer Federation of America

Finance Services Conference

Gary Gensler

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Financial Sector



Moves, Allocates & Prices Money and Risk



**By its very Nature it has Long had
Symbiotic Relationship with Technology**

Early Fintech - Money



Salt Bars - Ethiopia



Cowrie Shells - Nigeria



Tally Sticks - England



Rai Stones - Yap

Early Fintech - Money



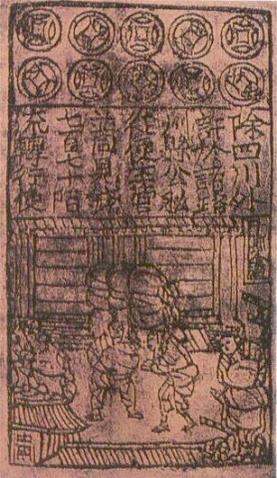
Cooper Plate - Sweden



Bronze Yuan - China



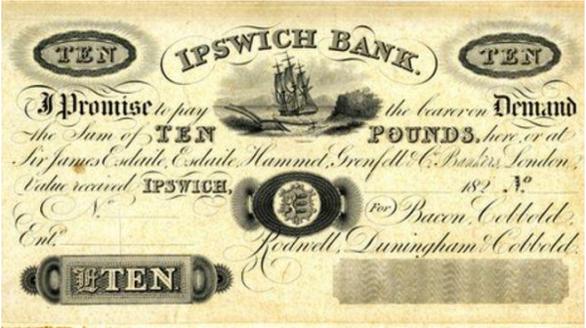
Gold Aureus - Rome



Jiaozi Promissory Note - China



5 Pound Note - England

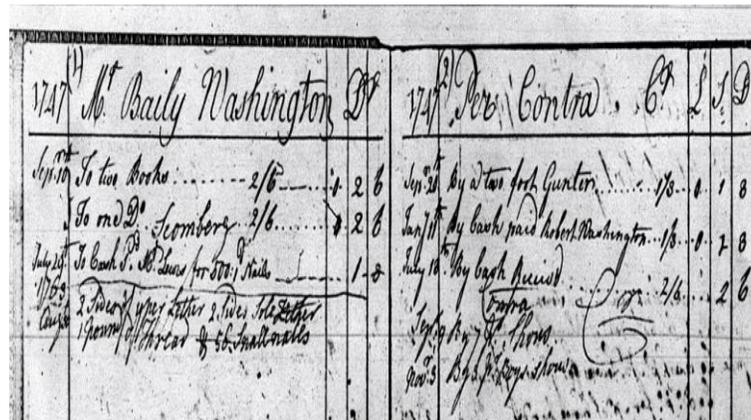


Private Bank Note - U.S.

Financial Technology - Ledgers



Proto Cuneiform
Uruk, ca 3000 B.C



Personal Ledger
George Washington
1747



IBM 360
1961

Fiat Currency

- Represented by:
 - Central Bank Notes
 - Central Bank Reserves &
 - Commercial Bank Deposits
- Relies upon System of Ledgers
- Accepted for Taxes
- Legal Tender for All Debts Public & Private
- Very Significant Network Effects from being Unit of Account



Digital & Mobile Payments



1998



1999



2003



2007



Mobile App

2011



2011



2013



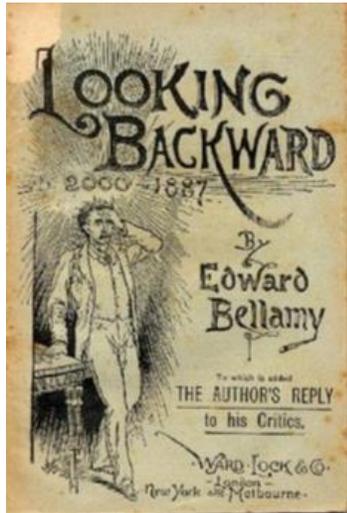
2014

Global Payments Methods

	2016	2021
■ Credit Card	29%	15%
■ eWallet	18%	46%
■ Bank Transfer	17%	16%
■ Debit Card	13%	8%
■ Cash on Delivery	9%	7%
■ Charge & Deferred Debit Card	6%	3%
□ Pre-Paid	3%	3%
■ PostPay	2%	1%
■ PrePay	2%	1%
■ Other	1%	0%

Source: Worldpay Report

Credit Cards



Term 'Credit Card'
Edward Bellamy's
Science Fiction
'Looking Backward'
1887



First Bank Card
Charge-It
First National Bank
Brooklyn, 1946



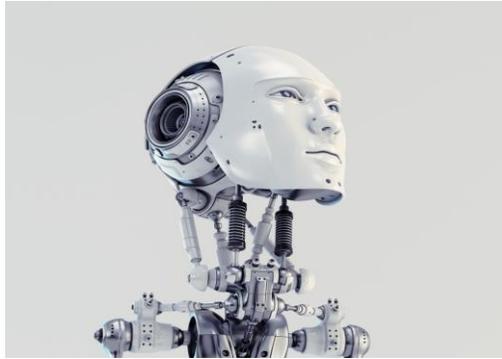
American Express
First Plastic Card
1959

Financial Sector => Fintech Opportunities

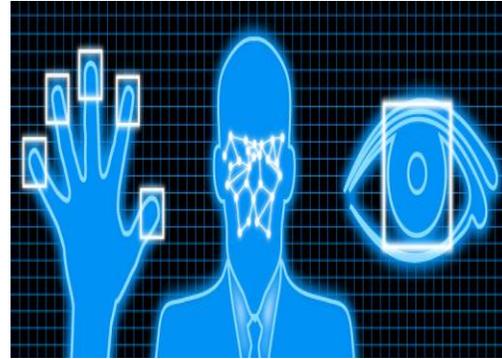


- Relies on Multiple Systems of Ledgers
- Collects Significant Volumes of Data
- Legacy Customer Interface and Processing Systems
- Economic Rents
- Centralized Concentrated Risks
- Infrastructure Systems' Costs & Counterparty Risks
- Repeated Crises and Instability
- Financial Inclusion

Technologies of our Time Affecting Finance



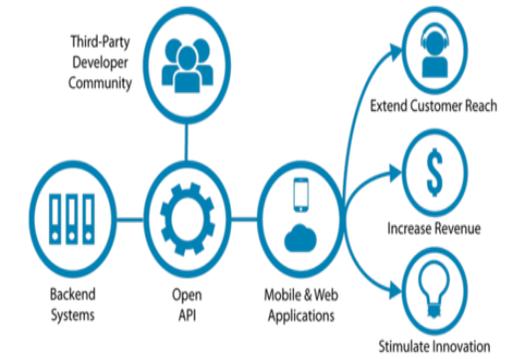
AI & ML



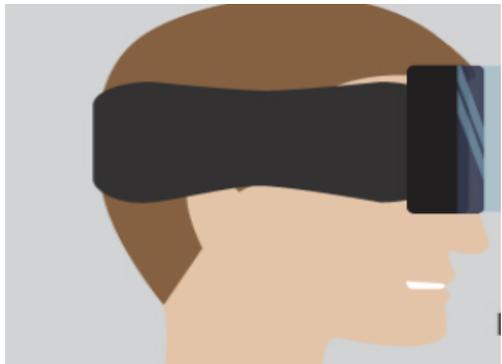
Biometrics



Chatbots



Open API



AR & VR



Blockchain



Cloud



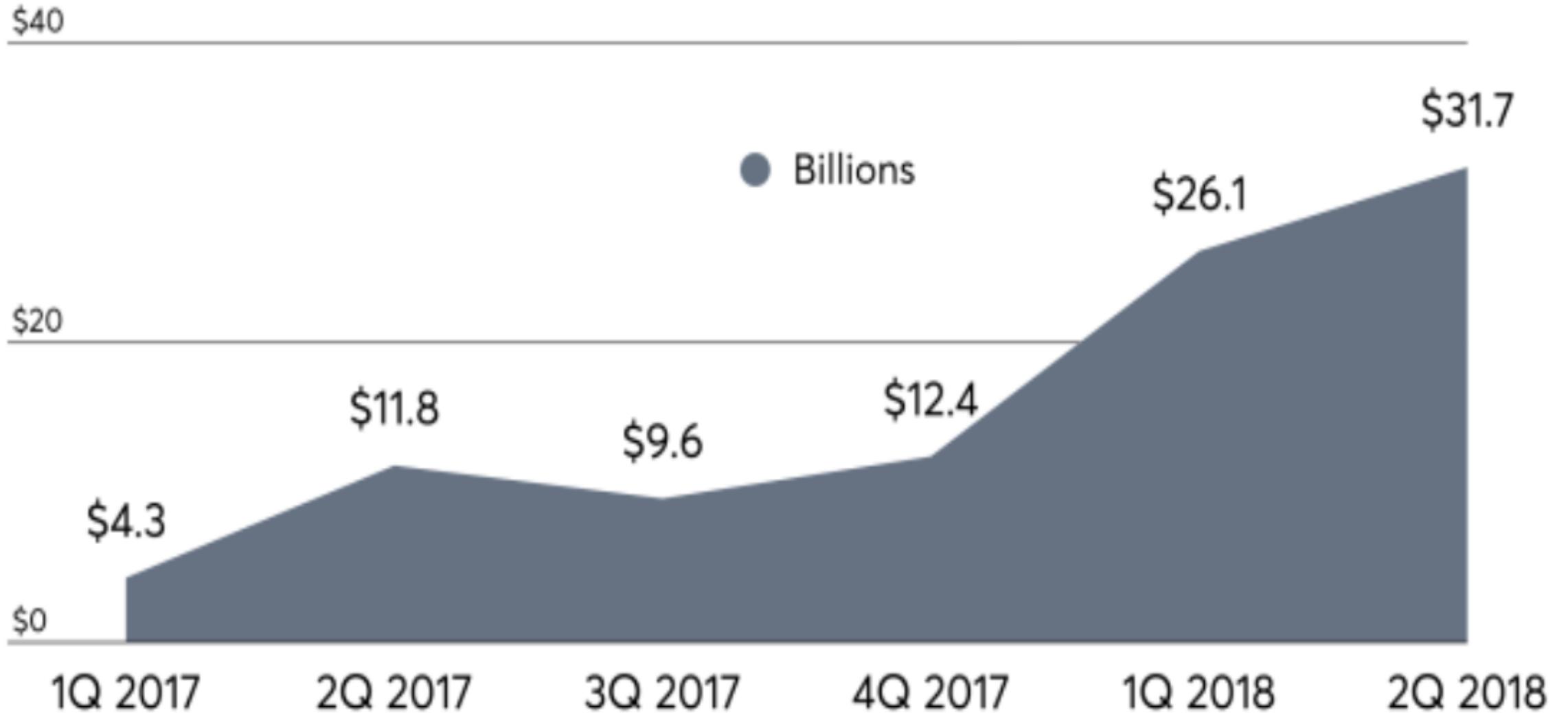
RPA

Financial Sector => Fintech Opportunities



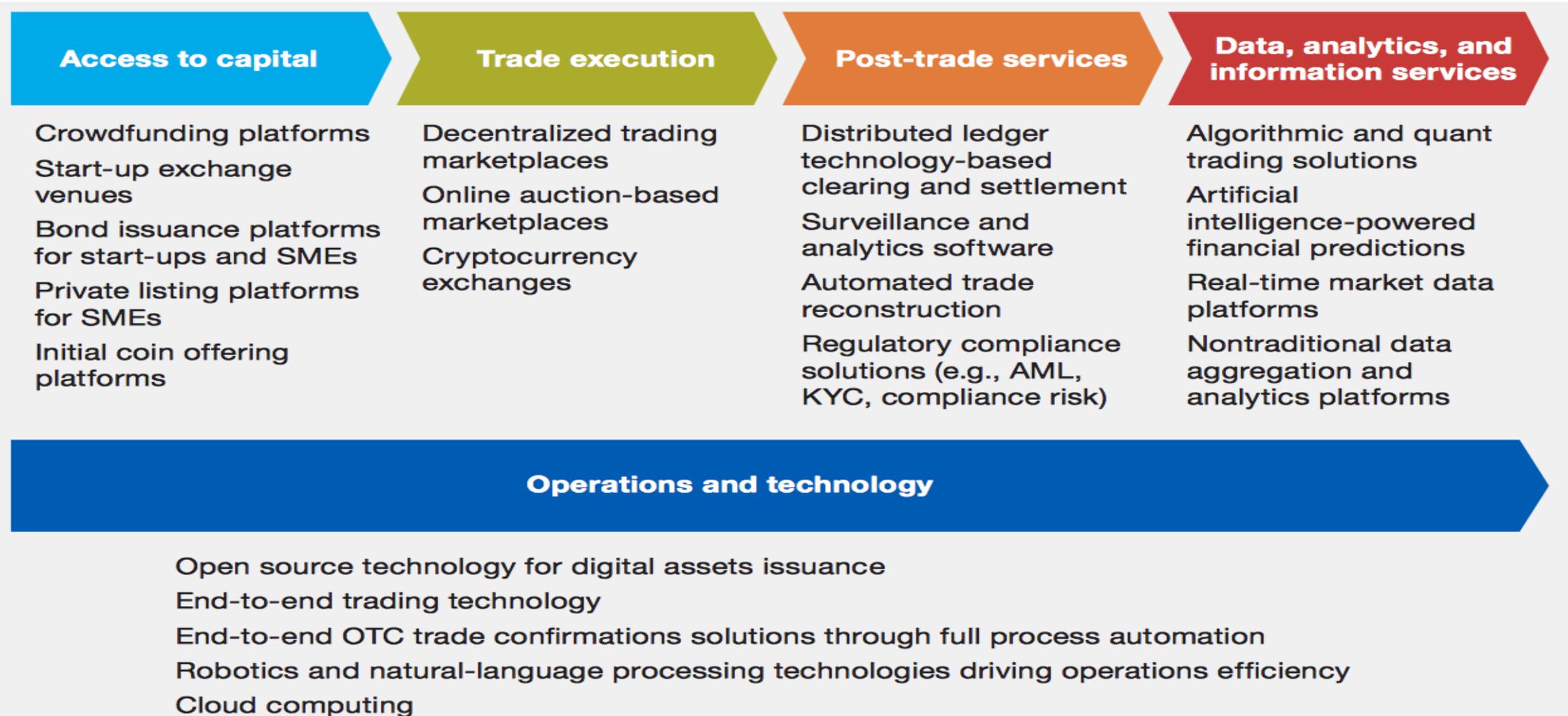
- Wide Public Acceptance and Adoption of New Tech
- Rapidly Expanding Customer Data
- Financial sector represents: 7 ½ % of U.S. GDP
- Payment system represents: ½ - 1 % of Global GDP
- **Disrupters, Financial Incumbents, Big Tech Will All Play a Role**

Fintech Funding



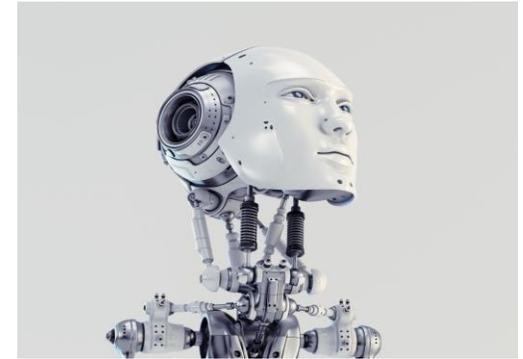
Source: KPMG Pulse of Finance 2018

Cap Markets Fintech



Artificial Intelligence and Machine Learning

- Ethics and Governance of AI:
 - Biases
 - Openness and Reviewability of Algorithms
 - Ownership of Data
 - Privacy and Self Sovereign Identity
- Communicative AI – Voice Recognition
- Chatbots and Robo-advisors
- Biometric Screening
- Cybersecurity



Blockchain Technology



- Provides Peer to Peer Alternative
- Addresses Verification and Networking Costs
- Use Cases Must Address why vs. Traditional Data Base?

- Financial Sector's Characteristics, Challenges and Scale Present Opportunities
- Incumbents Largely Looking at Private Permissioned Systems
- Crypto Finance Markets are Rife with Scams, Fraud and Manipulation

- Adoption rests on addressing Technical, Commercial and Policy Challenges
- The Potential, though, to be a Catalyst for Change is Real

Public Policy Framework

- Protecting the Investing and Consuming Public



- Guarding Against Illicit Activity



- Financial Stability



Conclusions



- Finance has long had a Symbiotic Relationship with Technology
- We already Live in a Digital Financial Age
- The Pace of Technology Innovation and Adoption has Accelerated
- Financial Sector Challenges creates Opportunities
- Disrupters, Financial Incumbents and Big Tech will all Compete & Play a Role
- Public Confidence is built upon Living within Public Policy Norms
- Development will Swing and much Hype Masquerades as Fact, but the Potential of Fintech to Provide Services and Bring Change is Real